Abstract of the Disclosure

A method for the leak testing of a motor vehicle fuel tank and associated evaporative emissions control system is provided. Nitrogen, compressed air or other gases are used to pressurize the system. The time required for pressurization is used to determine the tank headspace volume. The system pressure is then monitored for 120 seconds. The pressure drop in this period is then compared with a pass-fail value cutpoint from a look-up table stored in a computer attached to the testing apparatus. A pass-fail determination is then made. The pass-fail value cutpoint is pre-determined for a specified vapor volume and estimated liquid fuel temperature, as well as time of year, so that systems with leaks larger than a specified diameter consistently fail the test, while systems with leaks smaller than this value consistently pass the test. The test pass-fail criterion is thus compensated for the conditions (tank fill level and fuel temperature, and seasonal variations in fuel volatility) experienced in the actual test.